

CLAIMS

1. (currently amended) A wood treating formulation, ~~characterized in that the formulation is comprising~~ a mixture of a first solution ~~containing comprising~~ styrene and ~~mixed with~~ an initiator, ~~said initiator being present in amount of about 1% or greater based on styrene,~~ and a second solution ~~containing comprising~~ furfuryl alcohol ~~mixed with maleic anhydride,~~ wherein the initiator for styrene is chosen from 2,2'-azobis(2-methylbutane-nitrile), 1,1'-azobis(cyclohexane-carbonitrile), tertiary butyl perbenzoate or combinations thereof and an initiator, ~~said initiator being present in an amount of about 5% or greater based on furfuryl alcohol.~~
2. (currently amended) The wood treating formulation of claim 1, ~~characterized in that~~ wherein the first solution further comprises a crosslinker.
3. (cancelled)
4. (currently amended) The wood treating formulation of claim 2, ~~characterized in that~~ wherein the crosslinker of the first solution is divinyl benzene.
5. (currently amended) The wood treating formulation of claim 2, ~~characterized in that~~ wherein a mineral oil or wax optionally is present in the first solution as an extender.
6. (cancelled)
7. (currently amended) The wood treating formulation of claim 3 1, ~~characterized in that~~ wherein about 0,3% by weight of 2,2'-azobis(2-methylbutane-nitrile) based on styrene is present in the first solution.
8. (currently amended) The wood treating formulation of claim 3 1, ~~characterized in that~~ wherein about 0,4% by weight of 1,1'-azobis(cyclohexane-carbonitrile) based on styrene is present in the first solution.
9. (currently amended) The wood treating formulation of claim 3 1, ~~characterized in that~~ wherein t about 0,5% by weight of tertiary butyl perbenzoate based on styrene is present in the first solution.
10. (currently amended) The wood treating formulation of claim 4, ~~characterized in that~~ wherein about 3,5% by weight of divinyl benzene based on styrene is present in the first solution.
11. (currently amended) The wood treating formulation of claim 5, ~~characterized in that~~ wherein 0 to 30% by weight of mineral oil or wax based on styrene is present in the first solution.
12. (currently amended) The wood treating formulation of claim 1, ~~characterized in that~~ wherein 10 to 30% by weight of furfuryl alcohol, which is based on the styrene of the first solution, is present in the second solution.
13. (currently amended) The wood treating formulation of claim 1 6, ~~characterized in that~~ wherein 5 to 10% by weight of maleic anhydride based on furfuryl alcohol is present in the second solution.

14 - 26 (cancelled)

27. (currently amended) ~~The process of claim 14, characterized in that the wood treating solution is impregnated by~~ A method for impregnating a piece of wood, comprising immersing impregnating the wood in the with a formulation according to any one of claims 1-13 and thereafter curing applying a vacuum and pressure cycle to force the formulation into the wood

28. (currently amended) ~~The process of method according to claim 27 14, characterized in that wherein the wood is impregnated by immersing the wood in the formulation and applying a vacuum and pressure cycle, and further wherein the curing of the treating formulation impregnated in the wood is carried out by heating.~~

29. (currently amended) ~~The process method of claim 28, characterized in that wherein the curing polymerization is carried out by heating the impregnated wood sufficiently for it to reach 80 C in the center.~~

30. (currently amended) ~~The process method of claim 28, characterized in that wherein the curing finishing polymerization for products where odour must be kept to a minimum is carried out by heating the impregnated wood sufficiently for it to reach 120 C in the center for at least one hour.~~

31. (new) A wood polymer composite comprising a piece of wood having cells with cell cavities and cell walls, wherein at a substantially uniform penetration level, the cell cavities are filled by polymerized styrene, and the cell walls are filled with a furfuryl alcohol polymer.

32. (new) A wood polymer composite, comprising a piece of wood impregnated with a formulation according to any one of claims 1-13.